## CONTENTS



| Document modifications | | | | |
|---|---|---|---|---|
| **Version** | **Chapter** | **Description** | **Date** | **Author** |
| 00 | | Initial release | 09.12.2010 | J.A. Olano |
| 01 | | Pierburg Logo update | 17.01.2025 | J.A. Olano |
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# 1. Introduction.

In this guideline, you will find information and demands about how to create a proper Transport Label (TL) used by PIERBURG, S.A., **based on VDA 4902 Version 4 or its equivalent ODETTE Ver.1 Rev. 4, for Transport Labels.**

PIERBURG, S.A. has taken in consideration all quality standards that follow with material handling within the Automotive Industry.

In the lean and effective goods receiving process at PIERBURG, S.A., a set up with a fully automatic process with no manual interference of the administrational information are applied.

Suppliers delivering parts or raw materials to PIERBURG, S.A. must therefore be able to implement these requirements according to the PIERBURG, S.A. demands specified in this Guideline.

The label serves for the identification of packaging units in the plant-internal material flow and on the route of transport between Supplier - Forwarding Agent - Goods Receiver.

Therefore, the supplier shall ensure that all packaging units are marked with a barcode label. In particular the supplier will guarantee that the information on the label matches with the content of the packaging unit.

To avoid misunderstandings, labels that are out of date (ancient ones) must be removed from the packaging units by the supplier before a new delivery to PIERBUR, S.A.

PIERBUR, S.A. requires the following labels to be attache**d:**

- **Handling Unit Master Label:**

Applied to each transportation pallet / handling unit.

- **Packaging Unit Label:**

Applied to each Small-Part-Container, (e.g. VDA KLT), to each small cardboard box, or to each Packaging Unit.

The Packaging Unit Label serves to identify the parts in the manufacturing process and/or in storage. The “VDA KLT Label” should be used in these cases **(Standard VDA 4902 Version 4 or its equivalent ODETTE Ver.1 Rev. 4).**

## 2. Paper, Size and Material.

The preferred format of the TL is A5 (210x148 mm). In case that box size is smaller than this dimension, an A6 (148x105 mm) format can be used.

The TL paper must be white with black printing. The label material has to have a weight of not less than 160-170 g/m². This is to assure the TL information being readable in the complete supply chain.

TL must be supported by adhesive grey spots, used on Transport packages of Homogenous - and Mixed character when using plastic boxes without Label Holder. Only when using cartoon boxes label can bee fully shelf-adhesive.

The adhesive TL material, exclusive the back-side paper, has to have a weight of not less than 80 g/m².

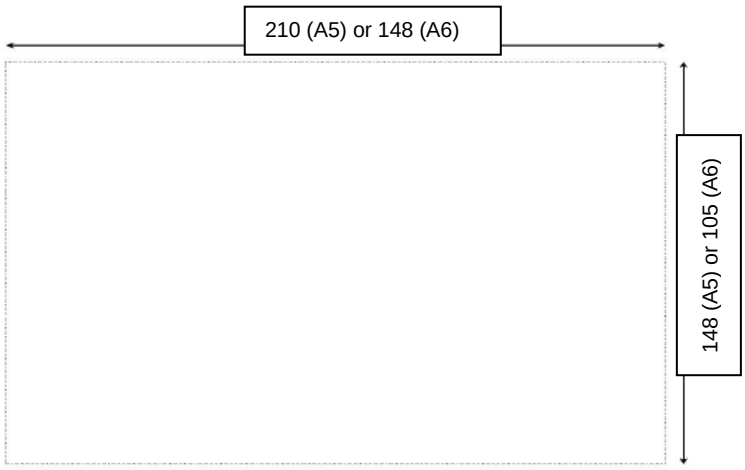
**Only in the case that returnable packaging is used that contains Label Holder on plastic boxes (KLT), it is not necessary to use an adhesive grey spot.**

Adhesive grey spot labels or full adhesive label may be pressure-sensitive or dry-gummed as long as the adherence to the package surface is assured and that the TL is removable from the transport package after usage. The adhesive should be of alkaline water-soluble kind to be approved in environmental aspects.

Recommendations of which TL printer paper to be used has to be requested by the TL paper supplier. For Direct Thermo it is recommended to use minimum Semi Thermal paper. The label must be durable enough to ensure readability at its destination, i.e. being water and sun resistant.

Illustration below describes the size of a TL, figures in millimetre (mm).

**The illustration below is not to actual size:**



## 3. Printers and Software.

To ensure readability of the bar codes, a very high print quality is demanded. Therefore PIERBURG, S.A. recommends using either a Direct Thermo or Thermo Transfer printers as they are more suitable for industrial printing and are more robust for the environment its working in.

A Direct Thermo printer is considered to be less expensive, more environmental friendly and demands less maintenance. This is due to e.g. no use of foil. In most cases a Thermo Transfer printer can easily be transferred to a Direct Thermo printer.

If a Laser printer is used to print the TL it must be, by the printer manufacturer, recommended for industrial use and printing.

This since a Laser printer is more sensitive to the environment it is working in. A configuration of the printing set up which allows edge compensation is NOT allowed as this will have a negative effect on the printed barcode.

A Laser printer is considered to best suitable when only small series of TL's are printed. This is due to high working expenses.

Matrix printers are NOT allowed in any supply chain to PIERBURG, S.A. because of low print quality aspects.

# 4. Data Area Layout.

### Data Area:

The size of each data area is defined to fit the content, considering font size, bar code heights and dimensions.

Outer border line (frame) should not be printed on the TL. This is to provide the best reading possibilities of the bar code.

Each data area should be separated by thin lines.

### Characters:

Any readable character set can be used, but PIERBURG, S.A. recommendations are the following:

· Font: ARIAL BOLD e.g. TL / 1234567890

· Character Set: ISO 3098-1

### Titles and Identifier Codes:

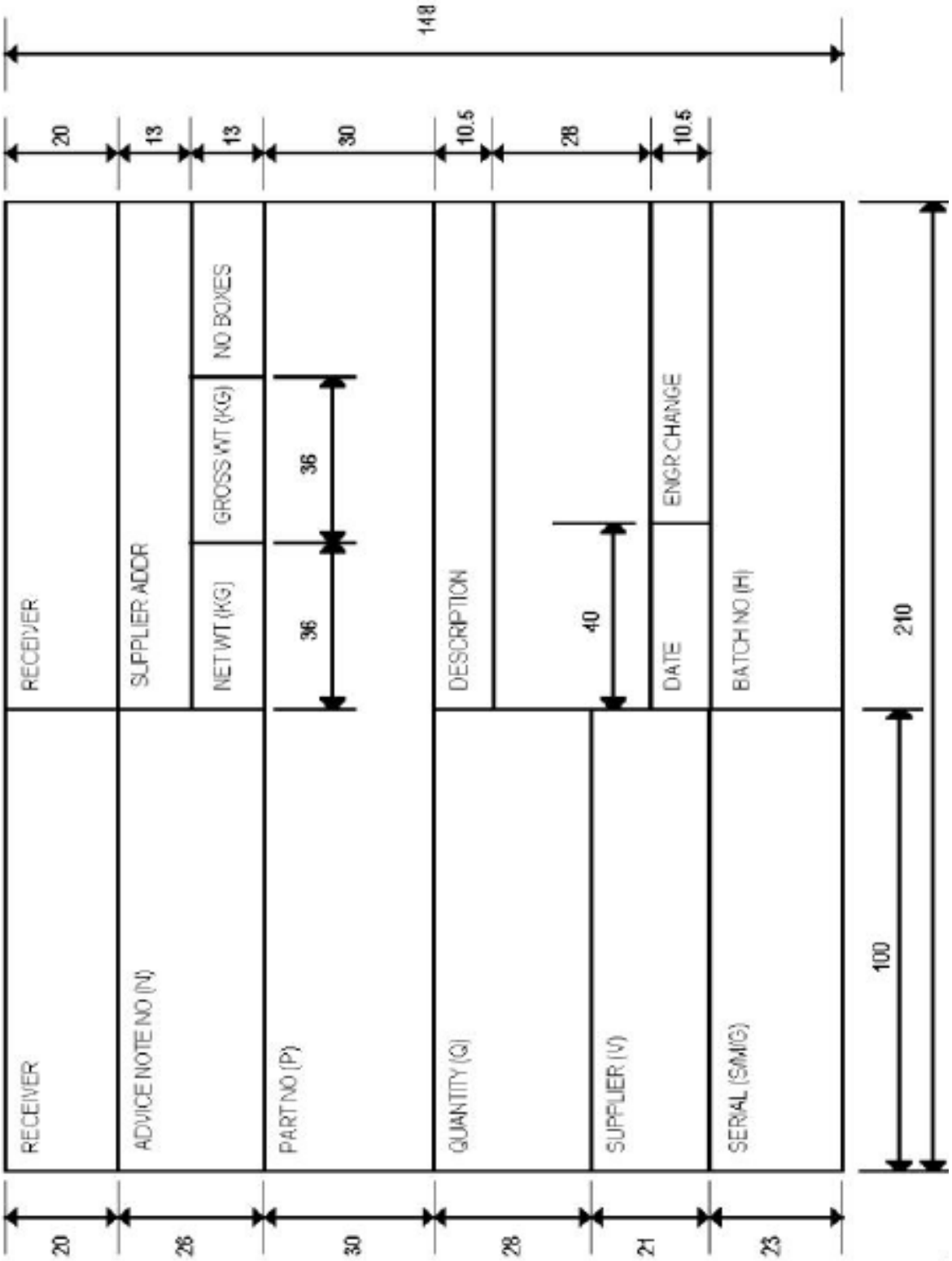
In the upper left corner of each data area, the Data Area titles shall be printed. **This information is allowed to be printed only in English or Spaniard languages.** Font size to be used is 1.5 mm.

Data Identifiers shall be printed as a part of the Data area title, at the end of the title and within brackets, e.g. Serial Number (S).

Further information regarding Data Identifiers is to be found in the Data Area Table in chapter 4.1, column Data Identifiers.

The illustration below shows the layout of the TL, figures in millimetre (mm).

**Notice! Not actual size.**



## 4.1 Data Area Content.

The data information in readable text must be printed above and in conjunction with the bar code, e.g. Delivery Note Number (N) (Advice Note Number).

Conditional Data Areas (Occasionally or Dependent information) which are not required by any agreement between PIERBURG, S.A. and the respective supplier, must be left blank. See Data Area Table in chapter 4.1.

Non-significant (leading) zeros and blanks/spaces in the data string should be suppressed / deleted, when the bar code and/or human readable characters are printed.

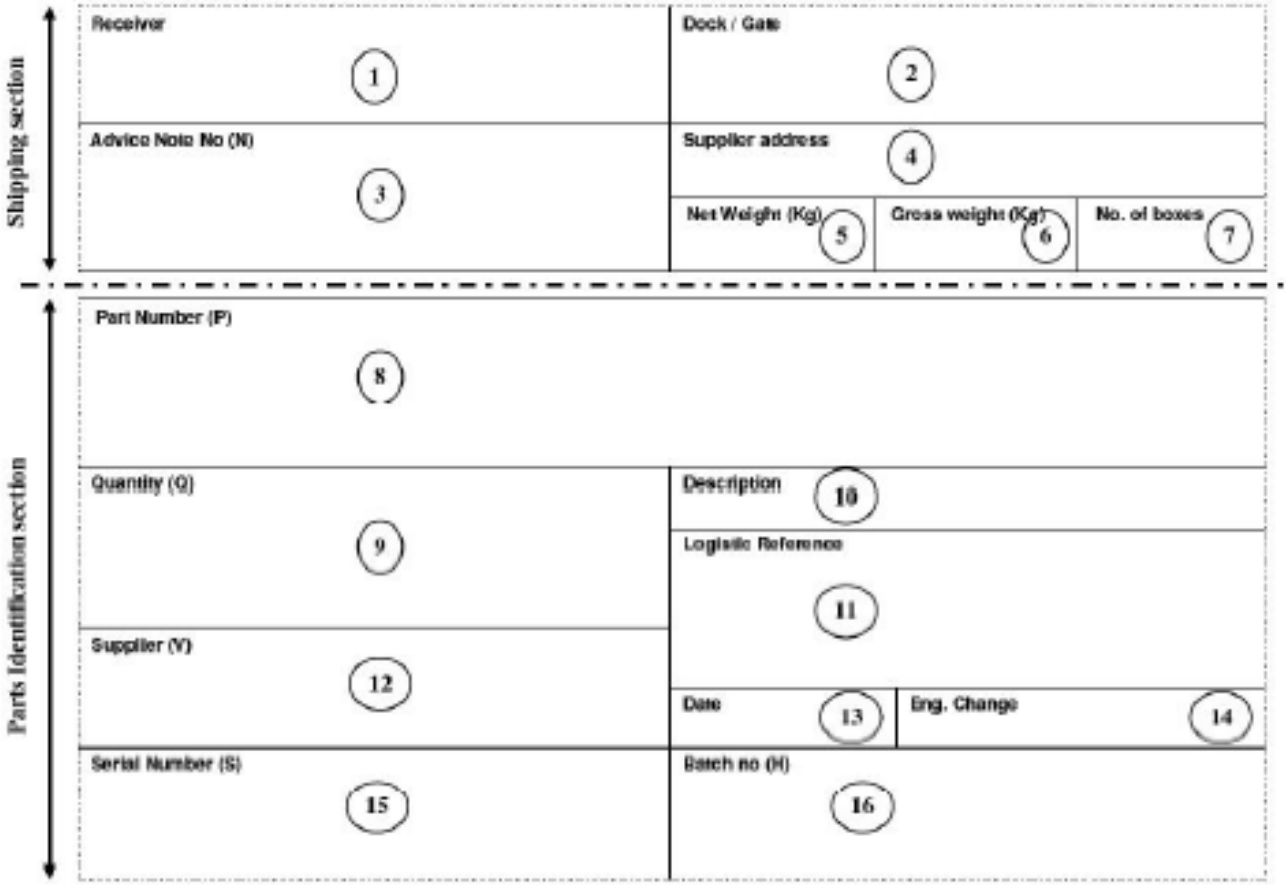
**The TL is divided into two sections:**

**Shipping section** – Receiver, Dock/Gate, Advice Note number, Supplier address, Net weight, Gross weight and Number of boxes.

**Parts Identification section** – Part number, Quantity, Supplier, Serial Number, Description, Logistic Reference Area, Date, Engineering change and Batch number.

The Data Areas are numbered from 1 to 16 and should be read together with information given in chapter 4.1, 4.2 and 4.3.

**Notice! Not actual size.**



## 4.2 Data Area Table.

| | Data Area Content | User Attributes | Field Length Excl. Data Identifiers | Bar code Size height (mm) | Text Size height (mm) | Data Identifiers |
|---|---|---|---|---|---|---|
| **SHIPPING SECTION** | | | | | | |
| 1 | **Receiver**<br>PIERBURG, S.A.'s unloading location. | **R** | **2 lines x an..20** | | **7** | |
| 2 | **Dock/Gate**<br>PIERBURG, S.A.'s final delivery point. | **R** | **1 line x an..12** | | **13** | |
| 3 | **Advice Note Number**<br>Supplier's delivery note number. | **R** | **an..8** | **13** | **7** | **N** |
| 4 | **Supplier Address**<br>Supplier's name and address, country of origin | **R** | **an..29** | | **5** | |
| 5 | **Net Weight**<br>Material weight within Transport Unit. | **D** | **n..5** | | **7** | |
| 6 | **Gross Weight**<br>Total Transport unit weight. | **D** | **n..5** | | **7** | |
| 7 | **No. of Boxes**<br>Number of packages within one Transport Unit. | **D** | **n..5** | | **7** | |
| **PARTS IDENTIFICATION SECTION** | | | | | | |
| 8 | **Part Number**<br>PIERBURG, S.A.'s Part number. | **R** | **n..15** | **13** | **13** | **P** |
| 9 | **Quantity**<br>Package or Transport unit quantity. | **R** | **n..10** | **13** | **13** | **Q** |
| 9 | **Unit Of Measurment**<br>Default value: PCE | **D** | **an..3** | | **7** | |
| 10 | **Description**<br>PIERBURG, S.A.'s part description. | **R** | **an..22** | | **7** | |
| 11 | **Logistic Reference** | **N** | | | | |
| 12 | **Supplier ID**<br>PIERBURG, S.A.'s Supplier number/ID. | **R** | **an..5** | **13** | **5** | **V** |
| 13 | **Date**<br>Material production date (P) or despatch date (D). | **D** | **an..7** | | **7** | |
| 14 | **Engineering Change**<br>Buyer's engineering change number. | **D** | **an..14** | | **7** | |

| | Data Area Content | User Attributes | Field Length Excl. Data Identifiers | Bar code Size height (mm) | Text Size height (mm) | Data Identifiers |
|---|---|---|---|---|---|---|
| **15** | **Serial Number** Supplier's Package or Transport Unit identification number. | **D** | **n..9** | **13** | **5** | **S** |
| **15** | **Master Label Number** Supplier's Transport unit identification number. | **D** | **n..9** | **13** | **5** | **M or G** |
| **16** | **Batch Number** Supplier's identification of documentation items. | **D** | **n..9** | **13** | **5** | **H** |

## LABEL INFORMATION

**User Attributes**:

**R = Required**
**D = Dependent**
**N = Not Used**

**Field Length:**

**an = alpha numeric value**
**a = alpha value**
**n = numeric value**
**..10 = 1-10 positions**
**10 = exact 10 positions**

**Data Identifiers**

**N = Advice Note Number**
**P = Part Number**
**Q = Quantity**
**V = Supplier ID**
**S = Simplified Handling Unit**
**M = Homogenous Handling Unit**
**G = Mixed Handling Unit**
**H = Batch Number**

## 4.3 Data Area Sections.

## - Shipping section:

**1. Receiver:**
**Alphanumerical human readable text**
**Designated by PIERBURG, S.A.**
**The destination name of PIERBURG, S.A.'s unloading location.**

**2. Dock/Gate:**
**Alphanumerical human readable text**
**Designated by PIERBURG, S.A.**
**This information must be flexible as it might be changed from one shipment to another due to changes in production. The information must be collected from the latest Delivery Schedule.**

**3. Delivery note number (N) (Advice note number):**
**Bar Code and Alphanumerical human readable text**
**Designated by Supplier.**
**The number may not be repeated within 12 months.**

**4. Supplier address:**
**Alphanumerical human readable text**
**Designated by Supplier**
**Name and shipping address of the supplier and country of origin.**

**5. Net weight:**
**Numeric Value**
**Designated by Supplier**
**Weight of goods in kilogram (kg) excluding transport packaging.**
**Unit of measurement must be printed in the title of the field in brackets.**

**6. Gross weight:**
**Numeric Value**
**Designated by Supplier**
**Weight of goods in kilogram (Kg) including transport packaging.**

**7. Number of boxes:**
**Numeric Value**
**Designated by Supplier**
**Number of boxes on the Transport Unit.**
**Is mainly used on Small box shipments.**

## - Parts Identification Section:

### 8. Part number (P):
**Bar Code and Numeric human readable text**
**Designated by PIERBURG, S.A.**
**Part number is designated by PIERBURG, S.A. for the product in the package.**

### 9. Quantity (Q):
**Bar Code and Numeric human readable text**
**Designated by Supplier**
**Quantity in the package shall be according to PIERBURG, S.A. packing instruction and it is unit load or a multiple of it.**
**Default the unit of measurement is pieces (PCE) and is not needed to be given.**
**However, if it is kg, pairs, meters, etc., the type code must be given in human readable form. When used, the unit of measurement must be printed directly to the right of the human readable quantity.**

### 10. Description:
**Alphabetical human readable text**
**Designated by PIERBURG, S.A.**
**Description of articles or products is according to what is given on the drawing.**

### 11. Logistics reference:
**Supplier owned**
**Designated by Supplier**
**Information is given to improve the logistics between the supplier and PIERBURG, S.A.**
**This area is normally reserved for the Supplier's part number.**
**However, if agreed by the supplier, the area may be used to print alternative data as specified by PIERBURG, S.A..**
**Please find the possible alternative data in the Odette Transport Label Version 1 Revision 4, (to be found at www.odette.org under publications).**

### 12. Supplier ID (V):
**Bar Codes and Alphanumerical human readable text**
**Designated by PIERBURG, S.A.**
**The supplier's code of the Manufacturing site.**

### 13. Date:
**Alphanumerical human readable text**
**Designated by Supplier**
**Date of dispatch (stated at first hand) or date of production.**
**The date must be printed in the format YYMMDD (Y = year, M = month, D = day) preceded by the character "D" (Dispatch date) or" P" (Production date).**

### 14. Engineering change
**Alphanumerical human readable text**
**Designated by PIERBURG, S.A.**
**To specify engineering changes.**

## 15. Serial Master label number (S, M or G):

**Bar Code and Numeric human readable text**
**Designated by Supplier**
**The serial number must be a unique number (not necessarily in sequential order) assigned by the supplier.**
**The number may not be repeated within 12 months.**
**Identifiers S, M or G are assigned according to label usage.**

## 16. Batch number (H):

**Bar Code and Characters**
**Designated by Supplier**
**Version/Source Indicator**

**This line indicates the exact version and source of the TL. To appear on one line, right just below the Batch number area, in the same font as the rest of the TL, 18 characters in human readable text, 2,5 mm character size, exactly as follows:**

**VDA 4902 Ver. 4 or Odette Ver. 1 Rev. 4**

# 5. Bar Code Symbols.

Bar codes must be of the 3-of-9 (code 39) type with the following requirements:

## Code Configuration:

The format for each bar code-element is: Start character, Identifier (Data Identifier), Data characters and Stop character. All bar coded areas are printed left justified.
Inter-character gap.

The space between two bars in code 39 should be as close to the average narrow element width as is practical.

## Quiet zones:

Bar codes require a quiet zone to the left and right of the bar/space pattern. Begin and end margins (quiet zones) must be at least 6.4 mm so that no line or similar (e.g. staples, straps or fixation stickers) makes the de coding of the bar code impossible**.**

## Bar code heights:

The height of the bar code must be 13 mm.
This to give the best possible scanning possibilities as the area allows.
Narrow element and Ratio Narrow element is the smallest bar element in the bar code.
Narrow element can also be named as X dimension.

- · Narrow element is allowed to be set between 0,33 - 0,43 mm.
- · Recommends is that the modulation is to be set to 0,33 mm.
  (Some printers having minimum 200 dpi the recommendation is 0,375 mm).

The Ratio is the proportion between narrow and wide element in the bar code.

| Narrow Element | Maximum Ratio |
|---|---|
| **0,33** | **3,0** |
| **0,36** | **2,8** |
| **0,40** | **2,4** |